

Purchase Order Receipt Listing

Wednesday, July 12, 2017 1:36:32 PM

All Vendors PO ID PO36836 Receipt Dates from 7/12/2017 to 7/12/2017 All Line Item Types
 All Item ID/GL/WOs All Rec. Employees All Currencies
 Grouped by Vendor ID

All amounts are calculated in domestic currency.

Page 1 of 1

Purchase Order ID/ Line Nbr/ Curr Type	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID/Vendor Name	VC-MET002	Metaux Solutions								
PO36836 2	MSTEEL-A2-B0.500X1.250	f 1,355 - 1,88		7/12/2017	7/12/2017	24,0000	\$9.54	0.0000	0	\$228.87
CAD No	AISI A2 TOOL STEEL BAR, 0.500 X 1.250	f 533		24,0000	PLOU01		\$228.87	0.0000	0	
3 No	M304TS0.750W.065 304 SQ Tube .75x.75x.065W	f DAS 9-89		7/12/2017	7/12/2017	200,0000	\$2.12	0.0000	0	\$423.83
	m138008			200,0000	PLOU01		\$423.83	0.0000	0	
4 No	M4130NBO.500X03.0 f 00 413O Bar 0.500 x 3.00	f		7/12/2017	7/12/2017	46,6666	\$23.08	0.0000	0	\$1,077.04
	m138008			46,6666	PLOU01		\$1,077.04	0.0000	0	
5 No	71500-20 304 SLAT 0.125" X 4" X 65" LONG	Each		7/12/2017	7/12/2017	56,0000	\$24.12	0.0000	0	\$1,350.71
	m138008			56,0000	PLOU01		\$1,350.71	0.0000	0	

Total Received Quantity:
 Total Qty to Inspect (PO U/M): \$326,6666
 Total Reject Quantity: 0.0000
 Total Receipt Value: \$0.0000
 Total Balance Due Quantity: \$3,080.46

METAUX SOLUTIONS INC
 2625 BOUL JACQUES CARTIER EST
 LONGUEUIL, QUEBEC
 J4N 1L7 Tel. : 450 641-3330

Shipping Order

10/07/2017

Order : 126774
Reference : 36836
Ship : PICK UP / PICK UP

Customer: 6323336

DART AEROSPACE LTD
 1270, ABERDEEN STREET
 HAWKESBURY, ONTARIO
 K6A 1K7

Ship To

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
TP12A2	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N A-2 PLATE TFA 1/2" THICK 2 X 1.25" -0+00 X 133.25" HT, pm76792 DAS 5 D-89	✓ 50	50	8
SSQT34340654	TUBE SS304 180 GRIT 3/4" X 3/4" X .065" 10 X 20' ***** DAS 9 HT;9G078	✓ 200	200	8
MP124130N	4130 NORM PLATE .500 THICK AMS 6345 40 X 3" X 14" HT;248571 Ank	✓ 11.6	11.6	0
SF1844	304 FLA .125 X 4.000 56 X 65" **** HT;109760	✓ 304.5	304.5	0

SHIP JOURNEY COLLECT

J-P

SPZD

Shipping : _____
 Package No : _____

Ref. : _____

Merchandise Received: _____

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7 Tel.: 450 641-3330

Customer: 6323336

Shipping Order

10/07/2017

Order : 126774
Reference : 36836
Ship : PICK UP / PICK UP

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Ship To

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
TP12A2	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N A-2 PLATE TFA 1/2" THICK 2 X 1.25" -0+00 X 133.25" HT; pm76792	50	50	8
SSQT34340654	TUBE SS304 180 GRIT 3/4" X 3/4" X .065" 10 X 20' ***** HT; 9G078	200	200	8
MP124130N	4130 NORM PLATE .500 THICK AMS 6345 40 X 3" X 14" HT; 248571	11.6	11.6	0
SF1844	304 FLA .125 X 4.000 56 X 65" **** HT; 109760	304.5	304.5	0

SHIP JOURNEY COLLECT

J-P

Shipping :

Package No. :

Merchandise Received:

Ref. :

NUCOR STEEL
4537 S. NUCOR ROAD; CRAWFORDSVILLE, IN 47933

REPORT OF TESTS

ATTN:	DATE: 1/20/15
FAX:	
SOLD TO:	JSTOMER ORDER # 081414MC
SIZE: 0.500" by 36" steel sheet	PRODUCT: HRPO light oil-FINE GRAIN AIRCRAFT QUALITY 4130 AMS 6345 Rev C ASTM-A 506 ASTM-A-635 AMS 2301 Rev J [successor to MIL-S-18729 COND N.] NORMALIZED OR OTHERWISE HEAT TREATED

AMS 6345

COIL #	HEAT #	YIELD	TENSILE	ELONG
1961550	(248571-06)	81.5 ksi	115 ksi	20%

TEST	RESULT	
*Average austenite grain size	#8	Pass
Decarburization (P/F)		Pass
*Bend Test (P/F)		Pass
*Response to Heat Treatment (P/F)	45 HRC	Pass
*AMS 2301 Quality Freq/Sev (P/F)	0/0	Pass

*These tests performed by outside lab, ISO 17025 certified.

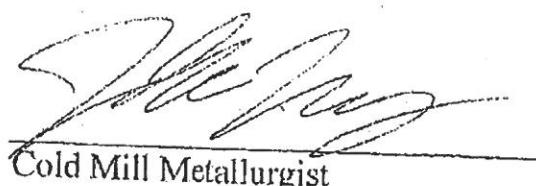
JK 12/07/18

HEAT #	C	Mn	P	S	Al	Si	N	Cr	Ni	Cu	Mo
248571	0.287	0.55	0.006	0.000	0.028	0.208	0.007	0.860	0.017	0.043	0.165

WE HEREBY CERTIFY THE ABOVE
IS CORRECT AS CONTAINED IN
THE RECORDS OF THE CORPORATION.

Melted and Manufactured in the USA

QF-0200, 10/17/05



Cold Mill Metallurgist

Kingmaker Steel Co., Inc.

Stainless Steel Tube and Pipe

133 Belmont Drive, Somerset, NJ 08873-1203
Tel.: (732) 302-1800, Fax: (732) 302-1822

00004729

Date: 6/8/2017

Invoice No: KM2017/1360

Purchase P008047

Order No:

Sold To:

Material Certification

ISO 9001:2015

ISO 14001:2004

EN 10204/3.1B

Ship To:

Stainless Steel T.I.G. Welded Tubing.

Country of Melt: Taiwan, Country of Origin: Taiwan.

Item	Description	Heat No.	Finish	Specification	Grade
1:	2" X 3" REC X 0.180"W X 20'	TBG070758	MF	ASTM A554-16	MT-304
2:	1-1/2" OD X 0.120"W X 20'	5A581	180G	ASTM A554-16	MT-304
3:	2" SQ X 0.180"W X 20'	5B076	180G	ASTM A554-16	MT-304
4:	3/4" SQ X 0.062"W X 20'	9G078	180G	ASTM A554-16	MT-304
5:	2" SQ X 0.180"W X 20'	5E259	MF	ASTM A554-16	MT-304

CHEMICAL PROPERTIES

	C	Si	Mn	P	S	Cr	Ni	Mo	N	Cu
1:	.038	.440	1.08	.034	.001	18.09	8.03			
2:	.018	.270	1.31	.031	.006	18.13	8.01			
3:	.024	.290	1.44	.031	.007	18.23	8.05			
4:	.025	.650	1.57	.031	.001	18.40	8.00			
5:	.024	.410	1.36	.029	.001	18.20	8.01			

MECHANICAL PROPERTIES

	Tensile (N/mm ²)	Yield (N/mm ²)	Elong. (%)	Hardness (HRB)	Flattening	Hydrostatic	Eddy Current
1:	666.00	306.00	54.00	88.00			
2:	648.00	302.00	51.00	86.00			
3:	619.00	271.00	53.00	85.00			
4:	677.00	279.00	53.00	85.00			
5:	640.00	289.00	55.00	87.00			

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE, THE MATERIAL LISTED ABOVE HAS BEEN MANUFACTURED IN ACCORDANCE WITH AND MEET THE ABOVE APPLICABLE SPECIFICATIONS AND GRADES, AND ALSO THAT THE MATERIAL WAS PRODUCED IN A MERCURY FREE ENVIRONMENT. THE CHEMICAL COMPOSITIONS OF THE MATERIAL ARE IN ACCORDANCE WITH ASTM A240.

Page: 1/1

Carrie Wang

Authorized Signature

6/8/2017

Date

		A04 MILL CERTIFICATE IS EN 10204/3.1 CERTIFICAT DE RECEPION NF EN 10204/3.1 ABNAHMEPRÜFZEUGNIS DIN EN 10204/3.1										N-Nr:N 16K0023863-01 VDI A03																																																																			
Correspondentieadres: operam Gruik Swinnenwijerweg 5, Poort Olenk 7523 3660 Genk, België Tel. +32 (0)89 30 21 11		Certified acc.PBD 97/23/EC Annex I § 4.3 by Certification Body 0036 of TUV SUD Industrie Service GmbH with Ver. No.:114/2007/MUC. Renounced of counter signature agreed by TÜV SÜD (WZ/2007). Approved acc. AD 2000-Merkblatt WO/TRD 100 by TÜV SÜD Industrie Service GmbH. Confirmation letter from TÜV SÜD Industrie Service GmbH of 07/05/2010 about the uniformity of coils acc. AD 2000 WZ § 4.1.1																																																																													
A01 Tech.Req : AD 2000 WZ -- AD 2000 WZ -- EN /3445-2		A02																																																																													
Manufacturer's works order number N° de la commande usine productrice Werkauflagennummer 80318219/01-20699/578/01		Surveyor's mark Cachet de l'expert Stempel des Werkstachverstandigen		GNKI		Purchaser and/or consignee Client et/ou destinataire Besteller und/oder Empfänger				Purchaser's order number N° de commande client Kundenbestellnummer 604909564		A03																																																																			
Product - Produit - Erzeugnis COIL, HOT ROLLED, ANNEALED AND PICKLED, UNTRIMMED COIL, LAMINA A CHAUD, RECUIT/DECAP/BORDS NON REFENDUS COIL, WARMGEWALZT, GEGLÜHT UND GEBEIZT, UNBESAGMT				Z03						Customer article number Numéro client Artikelnummer des Kunden ART018197		A03																																																																			
Steel designation Désignation de l'acier Stahlbezeichnung		B02		Plate thickness Présentation Aufzeichnung		B01		Steelmaking process Mode d'élaboration de l'acier - Stahlherstellungsvorfahren Prozessus: Elektro-Ofen - VOD/AOD - Continuous casting Proc. fabric: Four à arc - VOD/AOD - Coulée continue		C70		Product delivery condition Etat de livraison du produit - Lieferzustand Zustand freigegeben:																																																																			
EN 10208-7-2008 1.4307 / 1.4310 EN 10208-2-2014 1.4307 / 1.4301 ASTM A 240-2015 TYPE 304L / 304 ASME SA 240-2015 TYPE 304L / 304 EN 10088-4-2009 1.4307 / 1.4301		ID ID NO 1 NO 1 ID										Solution treated: Hypertonique: 1050 °C Lösungsgeglüht: 1050 °C Forced air-wash-air forced-air Gebläse Luft-Wasser																																																																			
NACE MR 0175 / ISO 15156-1 / ISO 15156-3 - NACE MR 0183 / ASTM A480 / A480M - ASME SA480 / SA480M // DIMENSION AND SHAPE TOLERANCES ACC. TO EN ISO 24442 // FREE OF RADIOACTIVE CONTAMINATION // CORROSION TEST: ASTM A262-B :OK														B04																																																																	
Identification of the product Identification du produit - Identifizierung des Erzeugnisses MELTED IN BELGIUM, MADE IN BELGIUM		B07		Dimensions Dimensions - Abmessungen						Number of pieces Nb de pièces - Stückzahl		B08																																																																			
Coil n. N Bobine - Band Nr. 61154425		Head n. N.Coulée - Schmiede Nr. 109760		Thickness Epaisseur - Stärke		B09		Width Largeur - Breite		B10		Length Longueur - Länge		B11																																																																	
				3.17 mm				1250.00 mm								Net weight Poids net - netto Gewicht																																																															
																B12 19020 KG																																																															
CHMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>C</th><th>Si</th><th>Mn</th><th>Ni</th><th>Cr</th><th>Mo</th><th>Ti</th><th>N</th><th>S</th><th>P</th><th>Co</th><th></th><th></th><th></th><th></th><th></th> </tr> </thead> <tbody> <tr> <td>Required -Exigé - Minimi Anforderung - Mindest Anforderung</td><td>0.03H</td><td>0.75</td><td>2.00</td><td>8.00</td><td>17.50</td><td>19.50</td><td></td><td>0.100</td><td>0.015</td><td>0.045</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Carl Analysis Analyse coulée Analyse Schmelze</td><td>0.027</td><td>0.37</td><td>1.44</td><td>8.00</td><td>18.07</td><td></td><td></td><td>0.074</td><td>0.005</td><td>0.031</td><td>0.200</td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td>C71</td><td>C72</td><td>C73</td><td>C74</td><td>C75</td><td>C76</td><td>C77</td><td>C78</td><td>C79</td><td>C80</td><td>C81</td><td>C82</td><td>C83</td><td>C84</td><td>C85</td> </tr> </tbody> </table>														C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	Co						Required -Exigé - Minimi Anforderung - Mindest Anforderung	0.03H	0.75	2.00	8.00	17.50	19.50		0.100	0.015	0.045						Carl Analysis Analyse coulée Analyse Schmelze	0.027	0.37	1.44	8.00	18.07			0.074	0.005	0.031	0.200						C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85		
C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	Co																																																																					
Required -Exigé - Minimi Anforderung - Mindest Anforderung	0.03H	0.75	2.00	8.00	17.50	19.50		0.100	0.015	0.045																																																																					
Carl Analysis Analyse coulée Analyse Schmelze	0.027	0.37	1.44	8.00	18.07			0.074	0.005	0.031	0.200																																																																				
	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85																																																																
Positive material identification carried out : OK Tests de vérification de la conformité de la nuance fournie : OK Verwischungsprüfung wurde durchgeführt : OK																																																																															
C04		C09																																																																													
Location (1)		MECHANICAL PROPERTIES - PROPRIÉTÉS MÉCANIQUES - MECHANISCHE WERTE EN ISO 6892-1 B / A-SA 370												C20																																																																	
		Room temperature - Température ambiante - Raumtemperatur												C21																																																																	
Direction (2)		Yield or proof strength Limite d'élasticité Dehrgrenze MPa						Tensile Strength Résistance à la traction Zugfestigkeit MPa						Elongation after fracture Allongement après rupt. Bruchdehnung % HRB		Hardness Durcissement Härte		Yield or proof strength Limite d'élasticité Dehrgrenze MPa		Test temperature (°C) Température de test Temperatur																																																											
1	T	Required Exigé Anforderung		min Rp0.2% 210		Rp1% 250		Rm 520 700		AS 45 45		92																																																																			
		Obtained Obtenu Ergebnisse		C11		C14		C18		C13		C15		80		C16		C17		C18																																																											
Impact strength test Essai de résilience Körtschlagbeanspruchungstest		Corrosion test Test de corrosion Korrosoatest						50.2(3)R(T) %																																																																							
C40 (N°c)		C44		EN 10036-1/2 - A:OK						42						C50		C51		C52		C53		C54		C55		C56																																																			
		C42		DS1						50.2(3)R(T)																																																																					
Location of the sample (1) Emplacement de l'échantillon Lage der Probenabnahmen		The delivery is in accordance with the order La fourniture est conforme aux exigences de la commande Die lieferung entspricht den bestellbedingungen												C57		Organisation inspection Organisme et/ou service contrôle Überwachungsabteilung		A06																																																													
Direction of the test pieces (2) Orientation des épreuves Probennahmung		Packing list Avis d'expédition Lieferchein-Nummer												A10		Quality Department																																																															
C01		Marking, inspection and measurement ; without objection Contrôle de marquage, d'aspects et de dimensions : satisfaisants Prüfung der Kennzeichnung, der Oberflächenbeschaffenheit und der Abmessungen : ohne Beanstandung												D01		3/5/2016																																																															
C02																The Inspector Le responsable Der Werkstachverstandige		D02																																																													



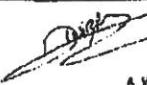
Aperam Stainless Services & Solutions Luxembourg S.A.
Avenue de l'Europe Site du PED - BP 55
L-4601 RODANGE
Tel: +352 50 64 81 1
Fax: +352 50 64 81 84

**TEST REPORT
RELEVE DE CONTROLE
WERKSZEUGNIS**

According to / Selon / Nachdem
EN 10204

BL: 0060196 - 2

Date: 22/11/2018

Manufact / Product / Herstell. APERAM STAINLESS EUROPE		Item / Article / Produkt (EN 10068)													
		F601844G FLAT BAR 4307 1D 3,170 X 101,60 X 3657,60													
Supplier Lot / Lot Fourn. / Band Nr 61154425		Customer / Client / Kunde													
Heat N° / N° de coulée / Schmelz Nr 109760		Order / Commande / Order 609037632 - 03													
Steel Designation / Désignation Acier / Stahlbezeichnung EN 10028-7 WNR 1.4307/1.4301 EN 10088-2 WNR 1.4307/1.4301 ASTM A 240(M) TYPE 304L/304 ASME SA 240 TYPE 304L/304		Reference / Référence / Referenz MPO18-51 (C105968)													
AD 2000 W2 ~ AD 2000 W10 ~ PED 2014/68/EU															
MILL Certificate / N° de Certificat / Prüfzeugnis Nr 16K0023863															
Chemical Analysis / Analyse Chimique / Chemische Zusammensetzung															
Test Analyst Antoine Corde André	C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	Cu	Al			
	0,027	0,376	1,447	8,001	18,073			0,074	0,005	0,031					
Mechanical Properties / Propriétés Mécaniques / Mechanische Werte EN 10002-1															
	Tensile strength Tensile Strength à la traction Zugfestigkeit NPA		Yield strength Résistance à la traction Zugfestigkeit MPA		Elongation after fracture (%) Rupture après cassage (%) Bruchdehnung			Hardness Härte Härte Rockwell Rc							
	Rp 0,2 %	Rp 1%	Rm		A5	55 mm		HRS	DCO						
	272	322	635			55		82,9	42						
Material Identification / Identification Matière / Identifizierung Sachgebiet															
Lot Nr N° Lot Los Nr	Weight Poids Gewicht		Lot Nr N° Lot Los Nr	Weight Poids Gewicht		Lot Nr N° Lot Los Nr	Weight Poids Gewicht		Lot Nr N° Lot Los Nr	Weight Poids Gewicht					
	Kg			Kg			Kg				Kg				
0989194	731														
0989208	768														
Number of lots / Nombre de lots / Bunde Anzahl : 2															
Total weight / Poids Total / Gesamt Gewicht [Kg] : 1499															
The Inspector Le Responsable Der Werkseckverstaendige															
 A. Vibet															

196662



Métaux Solutions

L'alliage de qualité et de rapidité !

2625, Boul. Jacques-Cartier Est
Longueuil (Québec) J4N 1L7

info@metauxsolutions.com

T 450 641-3330

Ext : 1-800-967-2003

CERTIFICAT D'ANALYSE

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

12 juillet 17

Product Description	Shipped Pcs	Back Ordred	PO LINE
A2-05000	1.00	0.00	
1/2 X 32 5/16" X 139 7/8" A2 PLATE			
ASTM A-681-08			
DFARS Compliant			
PLATE# : 417146A	PM HEAT#:	76792	DAS
Country of Origin USA		5	
C - 1.0000 Mn - 0.6900	P - 0.0220 S - 0.0010	9-89	BHN 226.00
Cr - 5.0800 Mo - 1.0200	Cu - 0.0800 V - 0.3200		Si - 0.3400 Ni - 0.1800
			W - 0.0500

ITEM 1: 2 X 1.25" X 133.25"

COMMANDE : 126774

REF : 36836

Métaux Solutions inc. certifie que les analyses sur ce document sont exactes et que le matériel rencontre les spécifications énumérées.

Préparer par

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MSteel-42-BG,500X1,250 PO / BATCH NO.: P036836/M138008
 DATE: JUL 18 2017

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 22'
 QUANTITY INSPECTED: 22'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500X1,250
 THICKNESS RECEIVED: 0.533X1,188-1,355
 SHEET SIZE ORDERED: _____
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<i>451m AC81</i>
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<i>HT #76792</i>
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION	DAS	ENGINEERING SIGNOFF (if required)
INSPECTED BY:	<u>5</u> <u>g-89</u>	SIGNED OFF BY: _____
DATE:	<u>JUL 18 2017</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

8 7 6 5 4 3 2

D

PURCHASE MATERIAL: AISI/A2 TOOL STEEL, ANNEALED CONDITION

SPECIFICATION: ASTM A681

PART NUMBER: MSTEEL-A2-BT-TTT X W.WWW

WHERE "T.TTT" = THICKNESS IN INCHES
"W.WWW" = WIDTH IN INCHES

EG. 0.500" X 1.250" BAR = MSTEEL-A2-B0.500X1.250
PER ASTM A681 AS FOLLOWING

TOLERANCES:

C

TABLE 14 Hot-Rolled Flat Bars
(Width and Thickness Tolerances, Width Tolerances)^a

Specified Widths, in. [mm]	Thickness Tolerances for Specified Thicknesses, in. (mm)		Width Tolerances, in. (mm)		Over Under						
	To 1/4 (6.4), incl.	Over 1/4 to 1/2 (6.4 to 12.7), incl.	Over 1/2 to 1 (12.7 to 25.4), incl.	(25.4 to 50.8), incl.							
To 1 (25.4), incl.	Under	Over	Under	Over	0.016 (0.41)	0.016 (0.41)	0.031 (0.79)	0.031 (0.79)	0.047 (1.19)	0.047 (1.19)	0.053 (1.30)
Over 1 to 3 (25.4 to 76), incl.	0.006 (0.15)	0.010 (0.25)	0.008 (0.20)	0.012 (0.30)	0.012 (0.25)	0.012 (0.25)	0.015 (0.34)	0.015 (0.34)	0.020 (0.51)	0.020 (0.51)	0.024 (0.61)
Over 3 to 5 (76 to 127), incl.	0.006 (0.15)	0.014 (0.38)	0.008 (0.20)	0.016 (0.41)	0.010 (0.25)	0.010 (0.25)	0.016 (0.41)	0.016 (0.41)	0.020 (0.51)	0.020 (0.51)	0.027 (0.68)
Over 5 to 7 (127 to 178), incl.	0.006 (0.15)	0.018 (0.46)	0.008 (0.20)	0.020 (0.51)	0.010 (0.25)	0.010 (0.25)	0.024 (0.61)	0.024 (0.61)	0.030 (0.76)	0.030 (0.76)	0.032 (0.81)
Over 7 to 10 (178 to 254), incl.	0.008 (0.20)	0.020 (0.51)	0.010 (0.25)	0.022 (0.56)	0.013 (0.33)	0.013 (0.33)	0.024 (0.61)	0.024 (0.61)	0.030 (0.76)	0.030 (0.76)	0.032 (0.81)
Over 10 to 12 (254 to 305), incl.	0.010 (0.25)	0.020 (0.51)	0.012 (0.30)	0.024 (0.61)	0.015 (0.38)	0.015 (0.38)	0.030 (0.76)	0.030 (0.76)	0.035 (0.89)	0.035 (0.89)	0.038 (0.98)
Over 12 to 173, incl.	0.012 (0.30)	0.020 (0.51)	0.014 (0.36)	0.030 (0.76)	0.018 (0.46)	0.030 (0.76)	0.039 (0.76)	0.039 (0.76)	0.046 (1.17)	0.046 (1.17)	0.054 (1.37)
Over 173 to 192, incl.	0.014 (0.35)	0.027 (0.68)	0.016 (0.41)	0.032 (0.81)	0.013 (0.46)	0.013 (0.46)	0.036 (0.81)	0.036 (0.81)	0.046 (1.17)	0.046 (1.17)	0.056 (1.42)
Over 192 to 254, incl.	0.014 (0.35)	0.027 (0.68)	0.016 (0.41)	0.032 (0.81)	0.013 (0.46)	0.013 (0.46)	0.036 (0.81)	0.036 (0.81)	0.046 (1.17)	0.046 (1.17)	0.056 (1.42)
Over 254 to 305, incl.	0.018 (0.46)	0.030 (0.76)	0.018 (0.46)	0.035 (0.89)	0.024 (0.61)	0.024 (0.61)	0.040 (1.04)	0.040 (1.04)	0.050 (1.27)	0.050 (1.27)	0.060 (1.47)

^a Out of square tolerance to be $\frac{1}{2}$ of total width tolerance max.

B

3

2

1

C

3

2

1

RELEASED
2012-09-12

A	NEW ISSUE	DESCRIPTION	AP	BY	DATE
DART AEROSPACE LTD					
HAWKESBURY, ONTARIO, CANADA					
REV. A					
MSTEEL-A2					
SCALE					
NTS					
COPYRIGHT © 2012 BY DART AEROSPACE LTD					
THE DOCUMENT IS PROVIDED CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED OR COPIED OR COMMUNICATED TO ANY OTHER PERSON, OR FOR ANY OTHER PURPOSE, EXCEPT AS PROVIDED IN THE AGREEMENT OF CONFIDENTIALITY, WHICH IS ATTACHED AS AN EXHIBIT TO THIS DRAWING.					

D

1

C

2

1

C

1

△
PURCHASE MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBING

FINISH: DAS 3/4" X .065"
 OR ASTM A554 MILL FINISH
 OR ASTM A289 MILL FINISH
 9 .89

WHERE: A.AAA = WIDTH IN INCHES
 .TTT = WALL THICKNESS IN INCHES

PART NUMBER: M304TS|A.AAA|W|TTT
 |WIDTH| |WALL|

PART NUMBER: EG. 0.75" X 0.75" X 0.049 WALL = M304TS0.750W.049

RELEASED
 2014-05-26
MAD

D	"SEAMLESS" REMOVED FROM PURCHASE MATERIAL SPECIFICATION (SEE NCR14-3818)	DB	14.05.20
C	"SEAMLESS" ADDED TO PURCHASE MATERIAL. ASTM A369 ADDED TO FINISH. REASON: SPEC ADDED FOR 1/2" TUBING	AJS	09.10.16
B	DRAWING MOVED TO "B" SIZE BORDER FINISH ADDED (SEE NCR 08-045 FOR DETAILS).	AJS	08.08.28
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DESIGN	DS	DB	
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	14.05.20		

A
 REV. D
 SHEET 1 OF 1
 DRAWING NO.
 M304TS
 TITLE
 304/316 SQUARE TUBING
 SCALE
 NONE
 COPYRIGHT © 2001 BY DART AEROSPACE LTD
 THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS THE PROPERTY OF DART AEROSPACE LTD.
 IT IS TO BE KEPT FROM UNAUTHORIZED PERSONNEL AND IS NOT TO BE COPIED OR DISCLOSED.

1

2

3

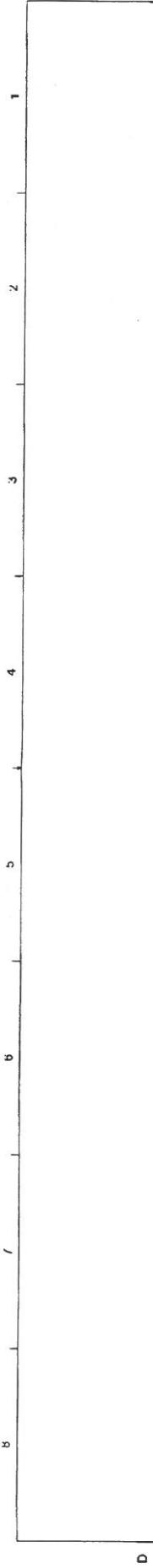
4

5

6

7

8



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: H304TS0750W.065
 DATE: 7.07.17

PO / BATCH NO.: P036836/M138008

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 200'
 QUANTITY INSPECTED: 200'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .065
 THICKNESS RECEIVED: .060
 SHEET SIZE ORDERED: 1/4A
 SHEET SIZE RECEIVED: 1/4A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
CORROSION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<u>ASTM A554-16</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
PHOTO REQUIRED	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<u>HT# 96073</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY:	<u>DAS</u> <u>9</u> <u>9-89</u>	SIGNED OFF BY:	
DATE:	<u>7.07.17</u>	DATE:	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NBB.500X3.06 PO / BATCH NO.: 368361138008
 DATE: 17/07/18

MATERIAL CERT REC'D:	<u>yes</u>	THICKNESS ORDERED:	<u>.500</u>
QUANTITY RECEIVED:	<u>410.4</u>	THICKNESS RECEIVED:	<u>.500</u>
QUANTITY INSPECTED:	<u>410.4</u>	SHEET SIZE ORDERED:	
QUANTITY REJECTED:		SHEET SIZE RECEIVED:	

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
CORROSION	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> <input type="checkbox"/> N	AMS 1a345
CORRECT THICKNESS	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
PHOTO REQUIRED	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> <input type="checkbox"/> N	HEAT# 248571
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> <input type="checkbox"/> N	M4130NBB.500X3.06
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> <input type="checkbox"/> N	M138008
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> <input type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/> <input type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>gyl</u>	SIGNED OFF BY: _____
DATE: <u>17/07/18</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



PURCHASE MATERIAL: AISI 4130N STEEL BAR PER MIL-S-6758 OR AMS 6345/6348/6370/6528

PART NUMBER: M4130N-B | T.TTT | X | WW.WWW
THICK | WIDTH WHERE T.TTT = THICKNESS (IN INCHES)
WW.WWW = WIDTH (IN INCHES)

EG. 0.5" X 3.0" BAR = M4130N-B0.500X03.000

RELEASED
08.07.09 MP

B	ADD AMS 6345			PH	08.05.05
A	NEW ISSUE			DS	01.06.08
REV.	DESCRIPTION			BY	DATE
DESIGN	<i>SH</i>	DART AEROSPACE LTD			
DRAWN	<i>SH</i>	HAWKESBURY, ONTARIO, CANADA			
CHECKED	<i>IP</i>	DRAWING NO.			REV. B
MFG. APPR.	<i>N/A</i>	M4130N-B			SHEET 1 OF 1
APPROVED	<i>MP</i>	TITLE			SCALE
DE APPR.	<i>SH</i>	4130 BAR			NTS
DATE	08.05.05	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO36836

Purchase Order Date 6/27/2017

PO Print Date 6/27/2017

Page Number 1 of 4

Order From : VC-MET002

METAUX SOLUTIONS
2625 BOUL JACQUES-CARTIIER EST
LONGUEUIL, QC J4N 1L7
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
JUN 27 2017

Contact Name
Vendor Phone 800 558 8858

Buyer Chantal Lavoie

Customer POID

10127-2607

Customer Tax #

Net 30

Terms

CAD

Currency

Destination-Collect

FOB

Ship To Contact
Ship To Phone
Ship Via: Journey Freight collect
Ship Acct:

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M174PH-H900R0.750	17-4 SS H900 ROUND BAR 0.750"	7/13/2017 No 7/13/2017	12.00	f	\$68.90	\$826.80

MATERIAL: 17-4 PH COND. H900

AS PER AMS 5643

NOTE: METAUX SOLUTION WILL SEND MATERIAL TO METCOR TO HEAT TREAT H900

FINISH:

HEAT TREAT TO COND H900

FTY IN EXCESS OF 170KSI

FTU IN EXCESS OF 190KSI

PER AMS2759/3

DETAIL C OF C REQUIRED

SP/77-D.

Line Total: \$826.80

Note:



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO36836

Purchase Order Date 6/27/2017
PO Print Date 6/27/2017

Page Number 2 of 4

Order From : VC-MET002

METAUX SOLUTIONS
2625 BOUL JACQUES-CARTIER EST
LONGUEUIL, QC J4N 1L7
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 800 558 8858

Buyer Chantal Lavoie

Ship To Contact
Ship To Phone
Ship Via: Journey Freight collect
Ship Acct:

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB Destination-Collect

2	MSTEEL-A2-B0.500X1.250	AISI A2 TOOL STEEL BAR, 0.500 X 1.250	7/4/2017	24.00	\$12.38	\$297.00
			Yes	f		
			7/4/2017			

MATERIAL: AISI A2 TOOL STEEL, ANNELED CONDITION
AS PER A681

TOLERANCE -0+0" AS PER QUOTATION #16619
CUT AT 1.25"

3	M304TS0.750W.065	304 SQ Tube .75x.75x.065W	7/4/2017	200.00	Line Total: \$2.75	\$297.00
			Yes	f		
			7/4/2017			

MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBING
AS PER ASTM A554 MILL FINISH
OR
AS PER ASTM A269 MILL FINISH

DAS

9

9-89

Line Total: \$550.00

Note:



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO36836

Purchase Order Date 6/27/2017

PO Print Date 6/27/2017

Page Number 3 of 4

Order From : VC-MET002

METAUX SOLUTIONS
2625 BOUL JACQUES-CARTIIER EST
LONGUEUIL, QC J4N 1L7
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 800 558 8858

Buyer Chantal Lavoie

Ship To Contact
Ship To Phone
Ship Via: Journey Freight collect
Ship Acct:

Customer POID 10127-2607

Customer Tax # Net 30

Terms CAD

Currency Destination-Collect

FOB

4 M4130NB0.500X03.000 4130 Bar 0.500 x 3.00 7/4/2017 46.67 \$29.95 \$1,397.66

Yes f

7/4/2017

MATERIAL: AISI 4130N STEEL BAR PER MIL-S-6758 OR AMS 6345/6348/6370/6528

40 PCS CUT TO SIZE 14"

Line Total: \$1,397.66

5 71500-20 304 SLAT 0.125" X 4" X 65" LONG 7/4/2017 56.00 \$31.30 \$1,752.80

Yes

7/4/2017

Each

Line Total: \$1,752.80

Deliver To: WATER JET

Note:



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36836**

Purchase Order Date 6/27/2017
PO Print Date 6/27/2017

Page Number 4 of 4

Order From : METAUX SOLUTIONS
2625 BOUL JACQUES-CARTIER EST
LONGUEUIL, QC J4N 1L7
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 800 558 8858

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB Destination-Collect

Ship To Contact
Ship To Phone
Ship Via: Journey Freight collect
Ship Acct:

6 71401-45	PROCUREMENT QUALITY CLAUSES	7/4/2017	1.00	\$0.00	\$0.00
------------	--------------------------------	----------	------	--------	--------

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

No
7/4/2017

Line Total: \$0.00

PO Total: \$4,824.26

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr:

1

Change Date: 6/27/2017